IN THE CLAIMS

Please amend the claims as follows:

Claim 1 (Currently Amended): A receiver, comprising:

an antenna which receives a radio signal including N possible symbols $\{c_1^{(n)}, c_2^{(n)}, \cdots c_{M-1}^{(n)}, c_M^{(n)}\}$ (where n is an integer satisfying the relation $1 < n \leq N$) each symbol represented by M chips (M is an integer equal to or more than 2);

~~an~~ N correlation units ~~which are provided~~ corresponding to said N possible symbols, respectively, each correlation unit detecting the degree of correlation with the radio signal received by said antenna; and

a symbol determination unit which determines the symbol included in the radio signal received by said antenna based on the degree of correlation detected by said N correlation units,

wherein said N correlation units detect the degree of correlation between the radio signal received by said antenna and the N possible symbols represented by M chips $\{\alpha_0 c_1^{(n)}, \alpha_0 c_2^{(n)}+\alpha_1 c_1^{(n)}, \ldots, \alpha_0 c_{M-1}^{(n)}+\alpha_1 c_{M-2}^{(n)}, \alpha_0 c_M^{(n)}+\alpha_1 c_{M-1}^{(n)}\}$ (where n is an integer satisfying the relation $1 < n \leq N$, and $\alpha 0$ and $\alpha 1$ are non-zero constants), and

a ratio between said $\alpha 0$ and $\alpha 1$ is a ratio between a channel impulse response coefficient of a preceding wave and a channel impulse response coefficient of a one-chip delay wave each included in the radio signal received by said antenna.

Claim 2 (Cancelled):

Claim 3 (Original): The receiver according to claim 1, further comprising a delay removal unit configured to remove a k-chip delay wave (where k is a constant equal to or more than 2) from the radio signal, the delay removal unit having a plurality of outputs,

wherein the outputs of said delay removal unit are inputted to said N correlation units, respectively.

Claim 4 (Original): The receiver according to claim 3, wherein said delay removal unit removes said k-chip delay wave from the radio signal based on the preceding wave included in the radio signal received by said antenna.

Claim 5 (Original): The receiver according to claim 3, wherein said delay removal unit removes said k-chip delay wave from the radio signal based on the one-chip delay wave included in the radio signal received by said antenna.

Claim 6 (Original): The receiver according to claim 1, further comprising a level comparison unit configured to compare a signal level of the preceding wave with a signal level of the one-chip delay wave each included in the radio signal received by said antenna,

wherein said delay removal unit removes the k-chip delay wave by using the preceding wave or the one-chip delay wave with larger signal level based on a comparison result of said level comparison unit.

Claim 7 (Original): The receiver according to claim 1, further comprising:

an amplifier which amplifies the wireless signal received by said antenna;

a frequency converter which converts the output signal of said amplifier to a low-frequency signal; and

an A/D converter which converts the output signal of said frequency converter to a digital signal,

wherein said N correlation units detect the degree of correlation based on the digital signal.

Claim 8 (Original): The receiver according to claim 1, wherein N correlation units detect the degree of correlation with respect to a wireless signal of CCK (Complementary Code Keying) modulation scheme or M-ary modulation scheme received by said antenna.

Claim 9 (Currently Amended): A receiver, comprising:

an antenna ~~which receives~~configured to receive a radio signal including N possible symbols $\{c_1^{(n)}, c_2^{(n)}, \cdots c_{M-1}^{(n)}, c_M^{(n)}\}$ (where n is an integer satisfying the relation $1 < n \leq N$) each symbol represented by M chips (M is an integer equal to or more than 2);

~~an~~ N correlation units ~~which are provided~~ corresponding to said N possible symbols, respectively, each correlation unit ~~detecting~~ configured to detect the degree of correlation with a preceding wave and a k-chip delay wave included in the radio signal received by said antenna; and

a symbol determination unit ~~which determines~~configured to determine the symbol included in the radio signal received by said antenna, based on the degree of correlation detected by said N correlation units,

wherein said N correlation units are configured to detect the degree of correlation between the radio signal received by said antenna and N possible symbols

$\alpha_0 c_1^{(n)}$,

$\alpha_0 c_2^{(n)} + \alpha_1 c_1^{(n)}$,

$\alpha_0 c_3^{(n)} + \alpha_1 c_2^{(n)} + \alpha_2 c_1^{(n)}$,

:

:

$\alpha_0 c_{M-1}^{(n)} + \alpha_1 c_{M-2}^{(n)} + \alpha_2 c_{M-3}^{(n)} +, \cdots, + \alpha_{M-2} c_1^{(n)}$,

$\alpha_0 c_M^{(n)} + \alpha_1 c_{M-1}^{(n)} + \alpha_2 c_{M-2}^{(n)} +, \cdots, + \alpha_{M-2} c_2^{(n)} + \alpha_{M-1} c_1^{(n)}$

each symbol represented by M chips (where n is an integer satisfying the relation $1 < n \leq N$, and $\alpha 0$ and $\alpha 1$ are non-zero constants, $\alpha_2, \cdots, \alpha_{M-1}$ are constants), and

a ratio between said $\alpha 0$ and $\alpha 1$ is a ratio between a channel impulse response coefficient of a preceding wave and a channel impulse response coefficient of a one-chip delay wave each included in the radio signal received by said antenna.

Claim 10 (Cancelled):

Claim 11 (Original): The receiver according to claim 9, comprising a delay removal unit configured to remove a k-chip delay wave (where k is a constant equal to or more than 2),

wherein the outputs of said delay removal unit are inputted to said N correlation units, respectively.

Claim 12 (Original): The receiver according to claim 11, wherein said delay removal unit removes said k-chip delay wave based on the preceding wave included in the radio signal received by said antenna.

Claim 13 (Original): The receiver according to claim 11, wherein said delay removal unit removes said k-chip delay wave based on the one-chip delay wave included in the radio signal received by said antenna.

Claim 14 (Original): The receiver according to claim 11, further comprising a level comparison unit configured to compare a signal level of the preceding wave with a signal level of the one-chip delay wave each included in the radio signal received by said antenna,

wherein said delay removal unit removes the k-chip delay wave by using the preceding wave or the one-chip delay wave with larger signal level based on a comparison result of said level comparison unit.

Claim 15 (Original): The receiver according to claim 9, further comprising:

an amplifier which amplifies the wireless signal received by said antenna;

a frequency converter which converts the output signal of said amplifier to a low-frequency signal; and

an A/D converter which converts the output signal of said frequency converter to a digital signal,

wherein said N correlation units detect the degree of correlation based on the digital signal.

Claim 16 (Original): The receiver according to claim 9, wherein N correlation units detect the degree of correlation with respect to a wireless signal of CCK (Complementary Code Keying) modulation scheme or M-ary modulation scheme received by said antenna.

Claim 17 (Currently Amended): A wireless LAN apparatus, comprising:

an antenna ~~which receives~~configured to receive a radio signal including N possible symbols $\{c_1^{(n)}, c_2^{(n)}, \cdots c_{M-1}^{(n)}, c_M^{(n)}\}$ (where n is an integer satisfying the relation $1 < n \leq N$) each symbol represented by M chips (M is an integer equal to or more than 2);

~~an~~ N correlation units ~~which are provided~~ corresponding to said N possible symbols, respectively, each correlation unit ~~detecting~~ configured to detect the degree of correlation with the radio signal received by said antenna;

a symbol determination unit ~~which determines~~configured to determine the symbol included in the radio signal received by said antenna, based on the degree of correlation detected by said N correlation units; and

a data processing unit configured to perform decoding based on the symbol determined by said symbol determination unit,

wherein said N correlation units are configured to detect the degree of correlation between the radio signal received by said antenna and the N possible symbols represented by M chips $\{\alpha_0 c_1^{(n)}, \alpha_0 c_2^{(n)}+\alpha_1 c_1^{(n)}, \ldots, \alpha_0 c_{M-1}^{(n)}+\alpha_1 c_{M-2}^{(n)}, \alpha_0 c_M^{(n)}+\alpha_1 c_{M-1}^{(n)}\}$(where n is an integer satisfying the relation $1 < n \leq N$, and $\alpha 0$ and $\alpha 1$ are non-zero constants), and

a ratio between said $\alpha 0$ and $\alpha 1$ is a ratio between a channel impulse response coefficient of a preceding wave and a channel impulse response coefficient of a one-chip delay wave each included in the radio signal received by said antenna.

Claim 18 (Cancelled):

Claim 19 (Original): The wireless LAN apparatus according to claim 17, comprising a delay removal unit configured to remove a k-chip delay wave (where k is a constant equal to or more than 2),

wherein the outputs of said delay removal unit are inputted to said N correlation units, respectively.

Claim 20 (Currently Amended): A receiving method, comprising:

receiving a radio signal including N possible symbols $\{c_1^{(n)}, c_2^{(n)}, \cdots c_{M-1}^{(n)}, c_M^{(n)}\}$ (where n is an integer satisfying the relation $1 < n \leq N$) each symbol represented by M chips (M is an integer equal to or more than 2) by an antenna;

detecting the degree of correlation between the radio signal received by said antenna and the N possible symbols represented by M chips $\{\alpha_0 c_1^{(n)}, \alpha_0 c_2^{(n)}+\alpha_1 c_1^{(n)}, \ldots, \alpha_0 c_{M-1}^{(n)}+\alpha_1 c_{M-2}^{(n)}, \alpha_0 c_M^{(n)}+\alpha_1 c_{M-1}^{(n)}\}$(where n is an integer satisfying the relation $1 < n \leq N$, and $\alpha 0$ and $\alpha 1$ are non-zero constants); and

determining the symbol included in the radio signal received by said antenna, wherein

a ratio between said $\alpha 0$ and $\alpha 1$ is a ratio between a channel impulse response coefficient of a preceding wave and a channel impulse response coefficient of a one-chip delay wave each included in the radio signal received by said antenna.

Claim 21 (Currently Amended): ~~A~~ An apparatus, comprising:

~~an~~ N correlation units ~~which are provided~~ corresponding to said N possible symbols $\{c_1^{(n)}, c_2^{(n)}, \cdots c_{M-1}^{(n)}, c_M^{(n)}\}$ (where n is an integer satisfying the relation $1 < n \leq N$) each symbol represented by M chips (M is an integer equal to or more than 2), respectively, each correlation unit ~~detecting~~ configured to detect the degree of correlation with a preceding wave and a one-chip delay wave included in a radio signal including N possible symbols; and

a symbol determination unit ~~which determines~~configured to determine the symbol included in the radio signal based on the degree of correlation detected by said N correlation units,

wherein said N correlation units configured to detect the degree of correlation between the radio signal and the N possible symbols represented by M chips $\{\alpha_0 c_1^{(n)},$

$\alpha_0 c_2^{(n)}+\alpha_1 c_1^{(n)}$, ..., $\alpha_0 c_{M-1}^{(n)}+\alpha_1 c_{M-2}^{(n)}$, $\alpha_0 c_M^{(n)}+\alpha_1 c_{M-1}^{(n)}$}(where n is an integer satisfying the relation $1 < n \leq N$, and $\alpha 0$ and $\alpha 1$ are non-zero constants), wherein

a ratio between said $\alpha 0$ and $\alpha 1$ is a ratio between a channel impulse response coefficient of a preceding wave and a channel impulse response coefficient of a one-chip delay wave each included in the radio signal received by said antenna.